

WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY LETTERS  
PATENT OF THE UNITED STATES IS:

1. A bacteria strain characterized by exhibiting:

(a) a  $7\alpha$ -dehydroxylase activity of less than 50%, and (b) a  
5 bile acid deconjugation activity of less than 50%, and  
descendants, mutants and derivatives thereof preserving  
activities (a) and (b).

2. The strain of claim 1, which is a gram-positive  
bacteria strain.

10 3. The strain of Claim 1, belonging to a species  
selected from *Streptococcus thermophilus*, *Streptococcus*  
*faecium*, and *Lactobacillus bulgaricus*.

15 4. The strain of Claim 3, wherein the bacteria strain  
is *Streptococcus thermophilus* YS 52 deposited with the  
CNCM, Collection Nationale de Cultures de Microorganismes,  
Institut Pasteur, under the accession number I-1670.

20 5. The strain of Claim 3, wherein the bacteria strain  
is *Streptococcus thermophilus* YS 46, deposited with the  
CNCM, Collection Nationale de Cultures de Microorganismes,  
Institut Pasteur, under the accession number I-1668.

6. The strain of Claim 3, wherein the bacteria strain  
is *Streptococcus thermophilus* YS 48, deposited with the  
CNCM, Collection Nationale de Cultures de Microorganismes,  
Institut Pasteur, under the accession number I-1669.

5 7. The strain of Claim 3, wherein the bacteria strain  
is *Streptococcus faecium* SF 3, deposited with the CNCM,  
Collection Nationale de Cultures de Microorganismes,  
Institut Pasteur, under the accession number I-1671.

8. The strain of Claim 3, wherein the bacteria strain  
10 is *Lactobacillus bulgaricus* LB 1 deposited with the CNCM,  
Collection Nationale de Cultures de Microorganismes,  
Institut Pasteur, under the accession number I-1664.

9. The strain of Claim 3, wherein the bacteria strain  
is *Lactobacillus bulgaricus* LB 3 deposited with the CNCM,  
15 Collection Nationale de Cultures de Microorganismes,  
Institut Pasteur, under the accession number I-1665.

10. The strain of Claim 3, wherein the bacteria  
strain is *Lactobacillus bulgaricus* LB 7 deposited with the  
CNCM, Collection Nationale de Cultures de Microorganismes,  
20 Institut Pasteur, under the accession number I-1666.

11. The strain of Claim 3, wherein the bacteria  
strain is *Lactobacillus bulgaricus* LB 77 deposited with the

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CNCM, Collection Nationale de Cultures de Microorganismes,  
Institut Pasteur, under the accession number I-1667.

12. A pharmaceutical composition for preventing  
and/or treating diseases associated with or caused by an  
altered metabolism of bile acids, comprising an effective  
amount capable of producing a normalizing effect on such an  
altered metabolism in a patient suffering therefrom, of  
(1) at least one bacteria strain provided with: (a) a  $7\alpha$ -  
dehydroxylase activity of less than 50%, and (b) a bile  
acid deconjugation activity of less than 50%, and  
descendants, mutants and derivatives thereof preserving  
activities (a) and (b), and  
(2) a pharmaceutically acceptable carrier.

13. The pharmaceutical composition of claim 12,  
wherein said at least one bacteria strain is a gram-  
positive bacteria strain.

14. The composition of Claim 12, wherein said at  
least one bacteria strain belongs to a species selected  
from the group consisting of *Streptococcus thermophilus*,  
*Streptococcus faecium*, and *Lactobacillus bulgaricus*.

15. The composition of Claim 14, wherein the bacteria  
strain is *Streptococcus thermophilus* YS 52 deposited with

the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1670.

16. The composition of Claim 14, wherein the bacteria  
5 strain is *Streptococcus thermophilus* YS 46 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1668.

17. The composition of Claim 14, wherein the bacteria  
10 strain is *Streptococcus thermophilus* YS 48 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1669.

18. The composition of Claim 14, wherein the bacteria  
15 strain is *Streptococcus faecium* SF 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1671.

19. The composition of Claim 14, wherein the bacteria  
strain is *Lactobacillus bulgaricus* LB 1 deposited with the  
20 CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1664.

20. The composition of Claim 14, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1665.

5 21. The composition of Claim 14, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 7 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1666.

10 22. The composition of Claim 14, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 77 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1667.

23. The composition of Claim 12, comprising  $10^3$  to  $10^{13}$  cells of the bacteria strain per gram of composition.

15 24. The composition of Claim 12, further comprising lactulose.

25. The composition of Claim 12, further comprising bile acid-based preparations, such as ursodeoxycholic acid and taurooursodeoxycholic acid.

20 26. A method for preventing and treating diseases caused by or associated with an altered metabolism of bile

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acids, said method comprising administering at least one bacteria strain characterized by exhibiting:

- (a) a  $7\alpha$ -dehydroxylase activity of less than 50%, and
- (b) a bile acid deconjugation activity of less than 5 50%, and descendants, or a mutant or derivative thereof preserving activities (a) and (b).

27. A method of claim 26, wherein the at least one bacteria strain is a gram-positive bacteria strain.

28. The method of Claim 26, wherein the bacteria 10 strain belongs to a species selected from the group consisting of *Streptococcus thermophilus*, *Streptococcus faecium*, and *Lactobacillus bulgaricus*.

29. The method of Claim 28, wherein the bacteria strain is *Streptococcus thermophilus* YS 52 deposited with 15 the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1670.

30. The method of Claim 28, wherein the bacteria strain is *Streptococcus thermophilus* YS 46 deposited with 20 the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1668.

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31. The method of Claim 28, wherein the bacteria strain is *Streptococcus thermophilus* YS 48 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1669.

32. The method of Claim 28, wherein the bacteria strain is *Streptococcus faecium* SF 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1671.

33. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 1 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1664.

34. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1665.

35. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 7 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1666.

36. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 77 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1667.

Add A<sup>4</sup>

Add B<sup>2</sup>